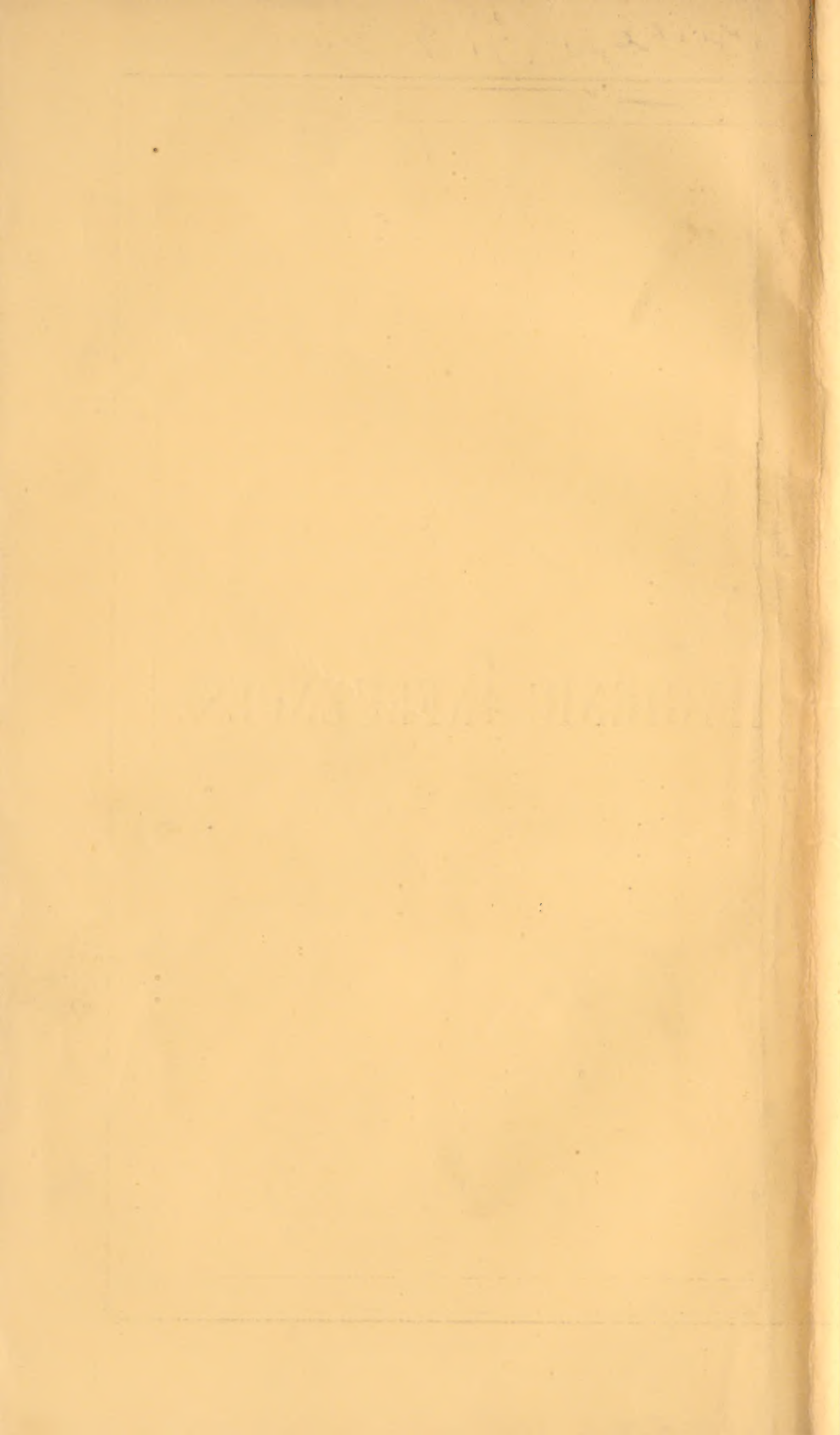


Burge (J. H. N.) ^{W. Ostrander M.D.}
with the Author's
Compliments.

HYGIENIC INFLUENCES.

box 11



Burge (J. H. H.)

AN ADDRESS

DELIVERED BEFORE THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS

ON ITS

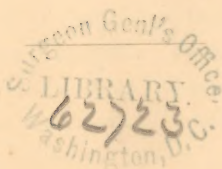
FORTY-SEVENTH ANNIVERSARY,

A. D., 1868,

*Presented by
A. E. M. Purdy*

BY

=Y
J. H. HOBART BURGE, M. D.



NEW-YORK:

FRANCIS HART & COMPANY, PRINTERS AND STATIONERS, No. 63 CORTLANDT STREET.

1871.

J. H. HOBART BURGE, M. D.,

President of the Medical Society of the County of Kings.

My Dear Doctor:

I hope you will not be offended at the liberty I have taken in having the manuscript I borrowed so long ago published. I send you the entire edition, and await your approval before appropriating a single copy to my own use, or distributing any copies among my friends. I particularly desired to see this address in print, because I believed it calculated to do good. It will present to the popular mind a clearer view of the relations of the medical profession to the people, than can be found perhaps anywhere else so concisely written. If you accept this tribute of my affectionate appreciation in the spirit which prompts it, I shall feel proud to have associated with your honored name, that of your sincere friend and quondam patient,

CHARLES C. YEATON.

New-York, May 25th, 1871.

ADDRESS.

In speaking to you on this forty-seventh, almost semi-centennial, anniversary of the Medical Society of the County of Kings, to be altogether professional would hardly be courteous to those of other tastes who have come up hither at our invitation; and yet, to lay aside entirely the themes upon which we are wont to reflect, would, perhaps, disappoint all. Attempting, then, no learned disquisition, I bespeak your indulgence while I talk of *Hygienic Influences*.

Of these, some are familiar to you as household words, yet even *these* we shall not pass over in silence; others are so subtle that no chemist has analyzed them,—no re-agent detected them,—no microscope discerned them; and yet, “by their fruits,” we “know them.” To treat *elaborately* and discuss *scientifically* even the *main topics*, which present themselves under the head of “*Hygienic Influences*,” would not only require much talent and research to make it of any practical value or interest, but the hour would be all too short for such a purpose.

The very *expression* suggests to your mind everything *physical, moral, intellectual, spiritual*, which can, directly or indirectly, have any effect upon vital phenomena. The subject being illimitable, it is obvious that I must prescribe to myself some special train of thought. Very briefly, then, let me suggest some of the influences which are exerted upon our health by *Generation, Nutrition, Ventilation, Occupation, Recuperation, Religion* and *Medication*.

There is no legacy which we can inherit or which we can ensure to our children, at all comparable to a good constitution. Of what avail is it to inherit gold, honor, titles, kingdoms, together with a gouty diathesis, a syphilitic taint, a

scrofulous habit, an epileptic predisposition, a rickety frame? The practical lesson in this connection lies in the fact that children are, with, of course, certain limitations and exceptions, just what their parents are. It is by this transmission of appetites, dispositions, faculties and frailties, that "the sins of the fathers are visited upon the children to the third and fourth generation of them that hate God," while through the same channel "mercy" is shown "to thousands of them that love Him and keep His commandments." There are whole families who never make a misstep without breaking a bone; who never cut a finger, or have a tooth extracted without danger of fatal hemorrhage; who never expose themselves to any depressing influence without dread of impending decline; who never live to middle age without sure prospect of cancer, insanity, or some other kindred ill. To none of these unfortunates have we any infallible elixir to offer. We can only say to them, avoid persistently the exciting causes of those ills to which you have a natural proclivity or pre-disposition, and submit yourselves to the best hygienic influences within your reach.

I venture a word more than I would upon this branch of my theme, because there is *no woe so keen* in this world as that experienced by a fond parent, in the chastening which sometimes comes through the cradle of his precious child.

Every physical organism possessed of circulating fluids and endowed with the vital principle, is constantly subject to molecular waste; and as effete particles are, by various wonderfully reciprocating processes removed, their places must be steadily supplied, or destruction to the whole system, or to some individual organ, must ensue. We *must* eat. So important is this that our beneficent Creator has established laws which act as universal life-preservers to the race. Not only is the supply of food regulated by the demand—through the arts of husbandry—but we are enticed by the delights of the palate on the one hand, or lashed by the pains of abstinence on the other, so that of all the methods of self-destruction, that by starvation is most unfrequent and most difficult to accomplish. No aliment can be regarded as suitable for the exclusive diet of man, unless in it are represented all the elements which enter into the composition of all the anatomical

tissues. Inanition is, therefore, possible even where large quantities of food are taken—that food being of unsuitable quality. This fact obtains at every period of life; so that infants are starved at the breast and die of marasmus, and men of full age die scorbutic in consequence of being fed upon a diet wanting some of the elements essential to supply the waste which, as already intimated, every *muscular motion*, every *arterial pulsation*, and every *intellectual operation* is sure to cause. Man is omnivorous, as is shown not only by his almost universal habit, but by his anatomical peculiarities. Yet so rich is the vegetable kingdom in nutrient materials—both nitrogenized and non-nitrogenized—that the experiment of proscribing animal food altogether has often been declared a success. It is said that neither Lamartine nor his mother ever tasted animal food. There are hundreds of vegetarians in our own country, who claim for their system great advantages. Though admitting that we cannot see any evils directly accruing therefrom to the masses, yet individual lives seem to be occasionally sacrificed by too rigid an adherence to the Grahamite theory. Beside, we cannot be sure that the strength of our race would not gradually be impaired, and new forms of disease developed, by following a system so decidedly at variance with some of the simplest indications of nature. The cupidity of those who deal in the necessaries of life has led to extensive adulterations, so that to get in their purity the commonest articles of daily consumption, is sometimes said to be the exception instead of the rule. The effect of this iniquity is two-fold—sometimes simply robbing us of the materials which we suppose we are taking, and sometimes introducing to our systems the most deleterious agents. To overcome this evil, legislation has proved impotent. Let every man, therefore, be his own inspector, his own chemist, and test, as far as practicable, the articles which are brought into his kitchen.

There are, perhaps, no *more universally* adulterated articles than *milk* and *coffee*; and I refer to these particularly as affording good illustrations of the two-fold effect already mentioned. If milk be simply diluted with pure water, the villain who does it has only to answer for withholding from the innocents who depend on him for their daily supply, one-half

of that nourishment which is essential to life. He does not *poison*, he starves a few hundreds; and because he cannot hear their piteous wail he imagines himself guiltless. The case is quite different when milk is otherwise adulterated, or when furnished from an impure source. Then the wretched dealer must answer for the direct but slow poisoning of his unconscious victims. Of the adulterations of coffee, so familiar to all, I have only to say, that in the case of an article almost essential to the health and comfort of those long accustomed to its use, if any *inert substance* be palmed off in its stead, a serious *loss* is sustained; while if it be adulterated with blasted rye, or any other material having toxic qualities, the evil lies in a direct attack upon the powers of life. Some will perhaps be surprised at this incidental praise of a beverage which often meets with unqualified condemnation. It will be instructive to note that *coffee*, *tea*, *cocoa* and *mate*, so different in external appearance, in taste, and in the sources from whence they are derived, contain active principles, called respectively *caffiene*, *theine* and *theo-bromine*, which are chemically almost identical, and which are found nowhere else. These active principles afford nourishment, gentle stimulation and direct support to the nervous system: and it is interesting to consider that different nations, at different times, long before these chemical relations were known, instinctively chose these articles as affording safe and refreshing daily beverages, and notwithstanding the occasional violent tirades of learned ignoramuses, they are as popular now as ever. But, are they never injurious? Yes. What is not? Like all good things, they should be used judiciously. So long as there are persons in the world of such delicate and impressible nervous organization, that some will even "die of a rose in aromatic pain," it is not strange that there are many who cannot take these powerful nervines, even in a very dilute state, without discomfort, neuralgia, headache or dyspepsia.

It is no doubt as natural for man, endowed as he is with reason to guide him to many inventions and discoveries, to cook his food, as it is for the panther to take his raw, and yet through the oven comes to us the greatest amount of injury to health and danger to life. The extent to which the culinary art has devoted itself to the pleasures of the palate, has ren-

dered easy, indeed, the first steps in the process of digestion, prehension, mastication, insalivation and deglutition,—while the more important processes of chymification, chylification, absorption, distribution and assimilation, are left to be wrought out with groanings unutterable.

Feasting is a delight which has been highly appreciated in all ages and by all classes of men. It is called generally a sensual pleasure, but it is so only in part, and especially when carried to excess. An active brain would soon collapse if fed only with intellectual pabulum. Never have I seen any class of young men do ampler justice to the noonday viands than students after four hours' close application to college themes, with almost no bodily exercise. The brain—the impressible organ upon which the spirit of man first operates in its *every* effort to communicate with the external world, is just as liable to waste and loss of substance, as are the other tissues of this wonderfully complex machine, and the materials for its repair are drawn from the same alimentary source. Call not, then, sensual with any emphasis which shall seem to cast a slur upon the pleasures of the table, that attention to the wants and cravings of “the inner man,” without which not only the heart would cease to beat, but the very “heart of hearts” would find no means of communication with its loved ones of earth, and without which, not only the “inner man” of this literal phrase would soon come to grief, but the highest achievements of the *veritable* inner man—the spirit itself—would be lost to earth for want of a suitable medium through which to convey impressions. It is natural and healthful to eat to satiety, and can hardly serve any good purpose, either physical or spiritual, to follow the advice of some ascetics and go hungering and thirsting all through life—unless it be “after righteousness.” But just here, let me remind you, that to eat to satiety of the Scotchman's oatmeal-stirabout, or of Yankee corn-bread, or of any other simple fare, such as honest toil would crave, is a very different thing from the satisfying of that last possible tingle of pleasure, of which the gustatory organs can take cognizance when tempted by a thousand dishes, in a thousand fascinating forms, with a thousand delicious sources and the conventional number of courses. Let me also remind you that there is generally nutriment

enough in a tithe of our food for all the requirements of the system, and that *nine-tenths* are taken solely for the pleasure of it. Again, in this connection, it should be said that although there is a healthy stimulus to body and mind, in a certain amount of even generous living, yet too frequent or too continued indulgence tends to sluggishness of thought and obscurity of the mental vision; while dieting and fasting are often of the greatest hygienic importance, freeing as they do the body from peccant humors and the soul from physical thralldom.

There is, perhaps, no subject, the importance of which is more universally acknowledged, and none more generally neglected than *ventilation*. As *air* is essential to life, so is *pure air*, and enough of it, to health. Every one knows that atmospheric air is composed of that great supporter of combustion and respiration—*oxygen gas*—diluted with about three and a-half times its volume of nitrogen, and that it is liable to be vitiated and rendered unfit for use in a great variety of ways. These sources of impurity are known and read of all men who make the slightest pretension to intelligence. One hundred years ago, facts which lie very near the foundation of physical science, and which are now familiar to all, were not known, even to the philosophers—and yet our grandfathers knew as well as we know the fact—that a man cannot live without air one-fiftieth part as long as a fish can out of water. Take away a man's native element and he dies quickly; take *half* away, and he dies less quickly; take away any portion of that which is necessary to the full and free expansion of his lungs, and to the thorough oxydizing and decarbonizing of his blood, and in that proportion he languishes. I can, of course, in the few words permitted me, only hurriedly hint at facts as familiar, perhaps, to every one of my auditors as to myself; yet, notwithstanding the "line upon line, and precept upon precept," to which we are constantly subjected, we live in ill-ventilated dwellings—and our court-houses, prisons, churches, school-houses and hospitals, though they be elegant structures, are often stifling in the extreme. No room can have proper and uniform ventilation unless there be means provided, at intervals proportioned to the room's capacity, for the free egress of both light and heavy gases.

The requisite ingress of fresh air to all parts of a building can seldom be had, unless provided for by the architect of that building in its original construction. I am not alone in the opinion that hospitals should have fresh air admitted at the head of each bed,—the beds, of course, being at least eighteen inches from the wall, and the patients properly protected from draught. Some of our common school-houses should have been indicted for manslaughter, or rather for infanticide long ago : the atmosphere in some of the rooms, particularly those assigned to the infant department being absolutely poisonous, and the temperature, on some of the colder days during the last winter, not rising to fifty degrees F. at any time during the daily session.

Stringent laws should be enacted, prohibiting property owners from leasing basement-room to be occupied as family residences. It is time enough to be put under ground after we have stopped breathing altogether. Not long ago, I called to see a sick girl who lived in one of these underground tenements. I said, as I entered, hardly seeing whether there were any to reply, "How can you expect to be well in such a place as this?" "Why," said the mother, "is not this healthy? I've lived here eleven years and always thought it a healthy place." I asked her if she had any other children. "Oh! yes," she said, "I've had seven, but there's only one left." Upon inquiry, I found they had all died in that room, and that they were cut off by just such diseases as were most likely to be developed by damp, foul air. There is no period when a pure atmosphere is more essential to health than during sleep, and yet this is the time when "tired Nature" is especially robbed of her rights—that which God designed as her "sweet restorer," being stifled with noxious and stagnant exhalations from lungs and skin, to say nothing of the products of combustion from coal and gas. (I would recommend, as particularly adapted to dormitories, the occasional swinging of the doors back and forth upon their hinges; try it and you will not think it so insignificant a point as it might otherwise seem.) What would our grandsires have thought of the attempt by weatherstrips or otherwise, to exclude the last breath of vital air as it struggles to reach some unconscious mortal in his heavy, unrefreshing slumber? As there is a time

and a place for everything under the sun, no doubt there is for weatherstrips; but as a rule, I would rather break out every fifth pane in your sleeping apartment, and by just so much would I lessen the pains in your physical organism. When our grandmothers lay upon their nurse's laps (nurses, did I say? Our *great*-grandmothers were their nurses), they could look out of the noble chimney-top and see the heavens, or feel at times the rain-drop or snow-flake; there was ventilation worthy the name! We would not go back to these primitive times of curfew-bells, cranes, pot-hooks, bake-kettles, foot-stoves, warming-pans, andirons, backlogs, fore-sticks, bellows, steel and flint—but let us not, in this age of comfort and luxury, forget the essentials of a hardy manhood, viz.: pure air, plain food, honest labor and full rest.

“As the sea contains a little of everything that is soluble in water, so the atmosphere may contain a little of everything which is capable of assuming the gaseous form. There are also floating in it innumerable particles of dust, some simple and innocuous; others irritant and poisonous.” In this circumstance is found the key to the remarkable healthfulness which prevailed during the early part of last summer. So frequent were the showers that the atmosphere was washed and constantly presented to us in its greatest possible purity. This branch of our theme naturally includes the effects of vegetation, together with all miasmatic, barometric, thermal, and electric changes in the atmosphere, and involves a consideration of the styles and materials of dress suited to different ages, seasons and climates. The methods of heating our dwellings also constitute a subject inseparable from that of ventilation. So diverse are these various branches of study that we can only allude to them, and slightly indicate their importance by a few desultory reflections. The lower the temperature of the air, the less of it can we comfortably admit to our dwellings, and the more fuel do we consume. Now, oxygen is alike the essential supporter of combustion and of respiration, and carbonic acid is alike the main *product* of both. Imagine, then, these two processes, combustion and respiration, carried on simultaneously in an apartment where the ingress of air is insufficient to supply this great demand, and you will behold a contest between the burners

and the breathers as to which can hold out the longest. Each is consuming the oxygen so essential to the other, and each is producing the carbonic acid gas, so stifling to the one and so extinguishing to the other. It would appear from these considerations that a fire should always receive the atmosphere necessary to its support, from some other source than the apartment intended to be warmed by it. *Ceteris paribus*, I have no doubt of the truth of this proposition; yet an open fire in a grate or on a hearth, where there is a free draught, may secure a more healthful condition of the air in the room than is generally the result of our cellar furnaces; for, in the one case the draught carries off freely the injurious products of combustion, and occasions an inward current of pure air from every crevice in every part of the room; while in the other case, the dried and rarified atmosphere is constantly pressed up from the chamber about the furnace, and may even have largely yielded of its vitalizing qualities to the incandescent mass below. The necessity of furnishing moisture to the air of every heated room is too familiar a fact to mention, and yet it is *generally* forgotten. I suppose the method of heating by steam comes nearer perfection than any other. It is automatic. It furnishes no blast of heated air from unknown and questionable sources. It gives its caloric directly to the atmosphere of the room designed to be warmed, without abstracting the oxygen so much needed for other purposes; and you have only to admit a sufficient amount of fresh air from without, and give suitable egress to that which is vitiated by respiration and insensible perspiration, to secure the greatest purity possible to a heated room, occupied by living beings, each one of whom demands about forty cubic inches of air for every minute of time. Sitting-rooms, lecture-rooms, school-rooms, churches, prisons, sleeping apartments, or any other places occupied for considerable periods uninterruptedly, should allow eight hundred to one thousand cubic feet of air to each occupant.

Among the many abuses which that noble animal, *the horse*, suffers at the hands of the ingrate whom he so faithfully serves, is that of being locked up every night in a tight box—not one stable in ten having sufficient ventilation. Owing to this and other depressing influences, horses are considered old at six-

teen, which ought to be vigorous at thirty years. A gentleman invited me the other day to look at a stable which he had just built for six high-priced and highly-prized horses; and though he considered it a paragon, I assure you there was not sufficient ingress of fresh air to inflate the capacious lungs of *one* such animal healthfully. This whole subject needs ventilating, but other topics beckon me away for the present.

Among the hygienic influences, of which I promised to say a word, is *occupation*. I have chosen this term purposely,—not *exercise*, but *occupation*. We may assume that to be the highest state of health in which there is the greatest normal development of all the powers and faculties of soul and body. Hence no amount of mere physical exercise can make a strong man—it *may* make a strong animal, with enough of the human to sustain him in respectable society. On the other hand, no amount of mere intellectual effort can make a strong man—it may make an enthusiast, a fanatic or a sickly philosopher, with enough of the animal to require food and drink. When it is said that to be healthy we must have exercise, let it be understood, then, that no mere muscular motion is meant by this, but the fullest and freest normal activity of all the powers and faculties which God has given us.

That blessed curse, “By the sweat of thy brow shalt thou eat *bread*,” and that generally overlooked commandment, “Six days shalt thou *labor*,” sufficiently indicate both the necessity and the duty of occupation. As “*bread*” is generic, standing for all food, so is “*labor*” for all active duty. It seems essential to the best health, that every one should have some definite object in life—some special avocation—and not be left to the caprice of the moment to determine what the mind shall contemplate or the hand fashion. Doubtless here is room for the greatest possible variety of choice and adaptation. Do not suppose because you occupy a high station in society that your son must be a professional man. He may be happier, more highly respected, and, what has more to do with our present purpose, he may be healthier in body and mind, in any other capacity. Never try to make a whistle or a silk purse till you have examined the materials with which you have to deal. It is a happy circumstance that the legitimate, honest and honorable occupations of man in every civil-

ized community, are so varied that every taste can be gratified, every one's ambition stimulated, every reasonable hope satisfied. Beside these, however, are many avocations which turn night into day,—many which necessitate the constant inhalation of noxious vapors, of metallic or other irritating particles, or the introduction to the system of dangerous elements; some which subject their followers to a temperature far above or far below the healthy standard; some which require a degree of toil too nearly incessant to be compatible with health, and some which demand a life so sedentary that vigor were an impossibility. Examples will readily suggest themselves to every mind.

We have used the word *occupation* to stand for exercise of every kind and degree, and we regard it as one of the most important of hygienic influences, that *every one* should have something *pleasant* to do, and you will not appreciate the full meaning of this remark unless you apply it to persons of every age, from the cradle to the grave, and to every condition of life. To supply material for healthful action of head, and heart, and hand, is a problem of no mean importance to the convalescent after severe illness, and in our public hospitals would save from many a relapse, and hasten the hour of perfect recovery. If this be true, what shall we say of the incurables?—those patient prisoners for life, who, with no hope of recovery, drag out the weary months, or even years, with *no occupation*. It may be they cannot read nor write—give them oakum to pick, a pine stick to whittle—give them dominos, jackstraws; *anything* but *stagnation*. There is, perhaps, no class who suffer so severely the depressing influence of *nothing to do* as little children. Their active brains will, under favorable circumstances, seize upon something congenial, and their little fingers are generally active in attempting to unravel the surrounding mysteries; but how important when disease or bereavement has awakened a morbid train of thought, and circumstances have conspired to shut from them that joy which is their proper occupation, that we should as quickly as possible supply the loss. Medicine will not do it; nutrients and stimulants will not do it; trinkets, and dolls, and pictures, and peep-a-boo, and a good hearty laugh, together with the very business of the baby-house, are alone adequate

to the task. Now, when cradledom is passed, let all the branches of education go hand-in-hand,—intellectual, moral, physical,—that each may aid the others, as it will, if none be unduly stimulated nor depressed. And let me beg you to remember that both girls and boys, even to early manhood and womanhood, should not only be catechized, and trained, and disciplined in all that is needful to develop an earnest Christian and literary character, but should have ample opportunity to run, and romp, and scream with fun. It is not conventional, but it is natural and sensible; and tan and freckles are vastly prettier than scrofula and effeminacy.

Next in hygienic importance to *labor, occupation, activity, exercise*—call it by whatever name you will—comes *Rest*, or, as we prefer to say, *Recuperation*. Not that these are synonymous terms; but rest being the *means* and recuperation the *end*, we prefer to keep the end in view. Not only the body, as a whole, requires frequent and regular periods of quiet and sleep, but each separate organ or system of organs needs opportunity to recover the power which is sure to be impaired by long continued effort. The *eye* may be used out of proportion to the other organs, and become amaurotic. In such a case, ordinary rest will not suffice. Let the eye itself stop all work, and roam pleasantly over the fields of nature. The *brain* may be unduly taxed while the amount of sleep is quite sufficient for the animal frame; stop all study—all close application to intellectual labor; let your thoughts be free and easy,—your conversation jovial,—your reading light, and the jaded organ will soon regain its wonted vigor. When the poor, abused stomach is made a *receptaculum omni rerum*, and called upon to digest food taken every hour in the day, is it any wonder that it rebels against such misrule, and refuses all overtures of peace? Even the heart itself, accustomed as it is to ceaseless though involuntary action, may be over-worked, and since it can never *rest* in the full sense of the word, till its destiny is fulfilled, it must be brought under sedative influences, and the other organs which suffer with it must minister to its comfort, and enable it to recuperate in the only way possible to such an organ. The muscular system, too often and too continuously taxed, grows sore, and stiff, and weak. The world is all alive to the importance of exercise; but lit-

tle is said or thought of the hundreds who die for want of rest—rest *for the body*—rest *for the mind*—rest *for the soul*.

The Sabbatical law is founded in the necessities of our three-fold nature, and its *spirit* extends to other days than the *seventh* and the *first*. Even those men whose Sundays are so actively spent in religious work, that the holy hours are more fully occupied than those of any other day, often find in the different set of faculties brought into exercise, just the relief their systems require. This necessity for bringing different powers successively into action in order that each, in turn, may rest and recuperate, is illustrated by the familiar fact that one, tired by walking on level ground, finds partial rest by ascending a gentle acclivity; and in the mental and moral world an illustration may be found in the alleged fact that the custom of appointing permanent curates to the great cemeteries of England was abandoned, because such continued sameness of intellectual effort was found to produce demency. There is no rule which can be laid down as to the *amount* of sleep which it is best for man to take. That ascribed to Franklin: "Five hours for a man, six for a woman, and eight for a fool," might have applied to himself, his wife, and to some simpleton whom he knew. It could hardly have had a wider range, since most men require the fool's allowance. Neither is the amount of sleep required any criterion of talent. Examples are familiar to *all* of those who require and take a liberal allowance of the "sweet restorer," and who, nevertheless, when awake are wide-awake, and ready to make their presence and power felt in their day and generation. On the other hand, I knew a mechanic of very ordinary ability, who seldom slept an hour at any time. He was full of vigor, and worked nearly as much by night as by day. Such instances as those of Napoleon and Charles the XII., are quite as rare in regard to their vigilance, as to their other distinguishing characteristics. Tossed and torn, wearied and worn, as is the whole degenerate race of man—*sickness*, and *sorrow*, and *death*—being so oft the legitimate sequence of *sin*, a rest and a recuperation are needed, such as no earthly pillow and no exemption from toil can afford. "Come unto me all ye that labor and are heavy laden," saith the Great Physician, "and I will give you rest."

The *hygienic influences of Religion* are many and great. It has been said that "any religion is better than none;" but it may reasonably be questioned whether some systems of religion are not equivalent to none. The word, you know, is from *re* and *ligo*—to bind anew, and implies either a binding by oath or obligation to God, or a binding or holding oneself back from the indulgence of any inclination which is not approved by the individual's conscience. Thus, you perceive, it involves on the one hand all the wild notions of the barbarian who sacrifices his offspring and tattoos his own body to appease the wrath of his imaginary God; and on the other, all the temperance, soberness and chastity—all the meekness, humility, faith, hope and charity of the true Christian. It must, therefore, in these its extremes, and in its thousand intermediate phases, exert a powerful hygienic influence upon every community. The rites, restrictions, ablutions, fasts, feasts and Sabbaths of the Jewish Theocracy were doubtless, in great measure, *designed* for sanitary effect; and if we consider the systems of the present day, we shall find some furnishing patients to our insane asylums, while others exert so salutary an effect upon the mind and heart, that they promote the health and increase the longevity of the race. While of true Wisdom it may be said: "All her ways are pleasantness and all her paths are peace;" "The way of the transgressor is hard," and "The ungodly do not live out half their days." Mormonism thrives on lust, degrading both soul and body; and many less flagrant systems, having in them the seeds of infidelity and self-indulgence, tend to lessen, materially, the standard of public health and morals. It is a trite remark that "he who is prepared to die, is best prepared to live;" but I tell you, my friends, when danger is imminent, such a one is more likely to live than he who has not the consolations of divine grace. I am much mistaken if I have not known anxiety as to one's spiritual condition to militate against convalescence. But the greatest value of religion in its hygienic relations is as a prophylactic. It prevents disease by restraining from those excesses and those indulgences which are sure to produce it; it casts its burden of cares upon one divinely strengthened to bear them; it moderates the intensity of a grief which might otherwise terminate in despair, insanity or

death ; it imparts of that "perfect love which casteth out fear ;" it restrains wrath, and enjoins upon him who would go through life "with his hand against every man and every man's hand against him," inasmuch as lieth in him to live peaceably with all men ; it forbids avarice ; it commands forgiveness ; it inculcates cheerfulness ; it inspires confidence in God, which is a good definition of faith ; it fills the soul with *hope* in the hour of greatest adversity ; and as already sufficiently implied, it confers "that most excellent gift of charity, without which, whosoever liveth is counted dead before God." Who that at all appreciates the intimate relations of soul and body, of mind and matter, can for one moment doubt that the possession of this all-pervading, all-embracing principle of divine love, is fraught with incalculable sanitary blessings ; while its absence leaves one a prey to temptations involving innumerable morbid agencies.

Of all the hygienic influences, none demand of us more extended notice than those of Medication. A facetious Yankee doctor, well-known to the readers of light literature, once said : "If all the medicine in the world were thrown into the sea, it would be all the better for mankind and all the worse for the fishes." Many regarded this as a slur upon the medical profession, and as an attempt on the part of the author to gain favor by yielding to popular prejudice, and by sacrificing fact to fun. A more careful consideration of the subject will, however, not only justify the remark, but will make men aware of the terrible danger which constantly overhangs them, and which, with shocking certainty, abbreviates the life of at least one in every hundred of our race. When we remember that medicine is administered not by educated and conscientious physicians only, but by charlatans innumerable, who know little of the effects of the agents they use, and still less of the maladies they profess to cure, nor yet by these alone, but by the rank and file of every community, so that the grand mission of every intelligent physician is to exhort people in the name of God and the Sixth Commandment not to dose, continually, themselves and their children. Moreover, when we reflect that every apothecary shop is packed, almost from Zenith to Nadir, with compounds equally villainous for inertness on the one hand, or for power of random good or

ill on the other, can you wonder that any careful observer should say : " These follies, these excesses, these ignorances, these cupidities, more than counterbalance all the good that highminded and conscientious practitioners are able to effect in relieving the ills of the flesh." " Throw, then, physic to the dogs," I say, and I say it *deliberately, heartily, conscientiously*, " Throw physic to the dogs," if you want the dogs to die and men to live, unless you can find in the circle of your search some good man and true, who devotes his life to the careful study of remedial agents in reference to their therapeutical value, and to the study of disease in its amenability to treatment. *Then, and then only*, may you, with any safety, medicate yourselves and your little ones. Fond mothers can never know, till they meet them on the other side the river, how many of their children they have sent home before the time, by the administration of what seemed to them some *simple*, domestic remedy,—mark the word, there was nothing simple about it, except the act of giving it, for it awoke a train of morbid sympathies in intricate and delicate organs which ceased not till the spirit was driven out in search of a more peaceful tenement, where it would be no more liable to disease nor death, nor to attacks of uneducated self-constituted doctors. A noble and honorable calling is that of the apothecary ; but a mere medicine-maker and vender is culpably ignorant or basely unprincipled. The runseller is saintly by comparison, for he never denies that what he sells will kill, while the other professes to make alive, but kills as surely. 'Tis a sad fact that thousands who would never go there for anything else, are willing to climb up to Heaven at the risk of their necks to find some new æthereal compound or sublimate,—or go as far in the other direction for pyrogenous or sulphurous mixtures, if they only knew that they would sell. I know not how to illustrate adequately the folly of submitting oneself to ignorant and non-professional medication. If you had a watch of curious and costly workmanship—valuable to you not alone for its intrinsic worth, nor yet for its simple relation to every day use and convenience ; but one associated with all that was dear to you on earth, and with those who had gone before you to Heaven, and to your dismay you should discover that something was disturbing the beau-

tiful harmony of its movements,—what would you do? Would you, with delicate tweezers, and fine points, and soft brushes, try to remedy the evil yourself? Or, would you go to a doctor of medicine, or a lawyer, or to some one else equally ignorant of the work to be performed, and equally destitute of the requisite means to be employed? Would you not rather seek an artisan who had well learned the trade of a watchsmith, and had judgment and honesty to practice it faithfully? Not inferior, in danger and criminality, to this self-dosing is the practice, unhappily too common among otherwise intelligent people, of entrusting the health and life of their families to some one who, through the various styles of advertising and the thousand meretricious arts which the regular profession scorns and condemns, has risen to notoriety and false fame. There is not one of this class who does not merit the halter. Each one knows himself to be a quack, yet owing to your encouragement and support, my non-professional Christian brother, he goes *scot* free. There is a class of quacks who are too ignorant to know it, and yet they are often learned and conscientious men. What a bull! The only explanation I shall offer of this apparent paradox is, that men may be very learned in some things which very few know anything about, and yet very ignorant of what everybody ought to know all about. Again, some are so visionary and credulous by nature, that no academic, collegiate or practical advantages or opportunities can possibly save them from all manner of clairvoyant, mesmeric, Swedenborgian and spiritualistic complications: against such, there is no protection for the non-professional masses, except such as is afforded by sterling sense and intuition. There is, however, a still more dangerous quack—a perfect *rara avis*. He is educated, and may be refined,—he has experience, knows how to treat disease, and he cures his patients. In what, then, you may ask, does his quackery consist? Simply in that he is dishonest, and uses his professional opportunities for base and selfish ends. Some will say: “If there are such men in the profession, how shall we protect ourselves against imposition?” I answer—just as you would protect yourself against a hypocritical clergyman, a tricky lawyer, a knavish tradesman, or a thievish clerk. If you will admit to the privacies and sanc-

tities of your family circle the profane, the vulgar, the intemperate and the licentious, you must not hold the profession, but the *individual* and your own *jolly* responsible for the consequences, whatever they may be. There are, no doubt, as bad men in any profession as there out of it; this fact must be charged to the race and not to the professions. No doubt, my friends, there be some who, for many years, have suffered many things of *many* physicians, and were nothing bettered, but rather grew worse; but 'twere well to reflect how many facts contribute to this result,—the certainly incurable nature of some maladies, the still greater intractability of some patients—and, lastly, the consummate ignorance of some doctors.

So many forms of unscrupulous criticism have been used against the medical profession by so many interested and prejudiced persons, that many are led to suppose, and are really honest in the conviction, that nothing is more vague, and uncertain, and contradictory, than medical practice. So far, however, is this from being true, that there is more of certainty and positiveness in the teachings of medical schools, and the application of medical principles, than is to be found in the theory and practice of either law or divinity. I have too deep a sense of the truth of divine revelation and the sacredness of the sacerdotal office, to push the comparison far in that direction; yet, who does not know that two teachers in Israel, equally learned and apparently equally honest,—reading the same word and studying the same history,—differ so widely, not only in externals, but in the vital points of faith and theology, that large congregations of earnest worshippers look upon each other as committing idolatry on the one hand, or “denying the Lord that bought them,” on the other. (The true explanation, however, of these differences is to be found in the short-sightedness of men, and more or less of uncertainty is inherent in all human affairs.)

High and holy as is the office of a judge; honorable as are the duties of a counsellor; sacred as is the law of the land—are there no doubts and uncertainties in the higher or lower courts? no decisions reversed? no innocents condemned? no traitors unpunished? no common criminals left unwhipped of justice? no princely fortunes frittered in endless quibbles on

technical points? 'Tis only a rare experience to leave the halls of justice thoroughly impressed with the positiveness and even-handedness of legal decisions, as were the two men who found the oyster. A dispute arising as to which saw it first, and consequently as to who should have it, they repaired to the office of a distinguished jurist, who assured them that in his judgment it was the simplest case imaginable,— unquestionably the oyster ought to be equally divided, to which the finders readily assented as eminently just and proper. The lawyer immediately proceeded to make the equal division by eating the oyster himself and giving to each client a shell.

As in *Theology*, there are sacred lights which occasional stupidity and hypocrisy can never befog; and, as in *Law*, there are precedents, and axioms, and golden rules, which no pettifogger's pitiable plea can obliterate. So in medicine, there are facts innumerable and inestimable which can never be obscured by the dust of passing theories, nor overthrown by the false logic of the charlatan; but, like the fixed stars, they shine brightly above all the clouds of error, and above every *ignis fatuus*, and all the flickering torches of quackery, which but serve to make the darkness visible in the stratum wherein they move.

Can any one doubt the fact that a perfect flood of light was poured into the brain and first stimulated the heart of our profession by Harvey's brilliant discovery?

Can there a man be found so unintelligent as to believe that the world gained nothing by a knowledge of the vital current's ebb and flow? Did Laennec, for all practical ends, listen in vain to Nature's "still small voice," as she speaketh the truth from the heart? And as Avenbrugger knocked at the door of Science, was there not a response elicited which, for all time, shall guide to surer diagnoses, and therefore to sounder therapeutics?

Is there anything in life more fixed and absolute than the teachings of chemistry,—which science has been developed and almost perfected by our profession? By it, poisonous substances, accidentally or criminally introduced to the system, are neutralized and rendered harmless,—by it the slightest aberrations from the healthy standard are detected in the ani-

mal fluids,—by it suicides are rescued from the effect of their madness; murderers brought to justice; dangerous adulterations exposed; valuable analyses effected; new combinations originated; new elementary substances discovered; and, what is more to our present purpose, a host of new remedies brought to light—definite in composition, certain in physiological action, and invaluable in their therapeutic relations.

Is anything in heaven or earth more certain than that the discovery of the immortal *Jenner* has saved millions from an untimely and loathsome death; tens of millions from disfigurement, and hundreds of millions from fear?

Did ever *Bell* ring out a clearer sound than that which Sir Charles caused to vibrate and undulate from brain to brain, from nerve to nerve, from ganglion to ganglion, through motor, and sensitive, and sympathetic?

Who has not heard of Marshall Hall's Reflex Motor action,—simplifying many obscure affections; and does not his very name bring to your mind's eye a drenched multitude rescued from a watery grave; even after the last sense of suffering had been experienced, and thousands of otherwise asphyxiated mortals brought back to the embrace of earthly friends?

Would bleeding humanity readily relinquish the gift of the renowned *Ambrose Paré*, and go back to the days of styptics and escharotics—exchanging the simple ligature for hot tar? Do you need to be reminded that myriads of lives have already been saved by the hæmostatic properties of the subsulphate of iron, so lately discovered by Monsel?

Can any one doubt the excellence and accuracy of Schleiden and Schwann's microscopical observations in 1837, in their bearing upon physiology and pathology; and the subsequent demonstration by *Virchow* and others, of the cellular origin and growth of all living tissues, normal and morbid?

Who does not know that the practical suggestion of our own T. Gaillard Thomas has enabled us to slip the cord that would otherwise have bound many an innocent juvenile to inevitable death?

Are you not all familiar with the opium treatment of peritonitis, introduced by the elegant and erudite Alonzo Clark, of New-York—a discovery by which he has saved the lives of a thousand wives, though he never had a wife of his own?

Who thinks now of questioning the feasibility of ovariectomy, an American operation, introduced by Ephraim McDowell, and clearly proved to be less fatal than amputation of the thigh after severe injuries? Again, what American is not proud of the triumphs of Marion Simms, in a field not previously unexplored, but one which required just his indomitable energy and perseverance to overcome its sterility?

If you should chance to meet with that horrible accident, dislocation of the hip joint, would you be patient under the direction of one who should carry you back to the days of the lancet, the hot bath, tartar emetic, tobacco and the pulleys, instead of the gentle, painless, American method revived and established by Reid, of Rochester?

Can any one, relieved in the twinkling of an eye by hypodermic medication, of an excruciating neuralgia, ever doubt his obligation to the profession in general, and to Charles Hunter, of London, in particular? Is it of no consequence that aneurism succumbs to *digital pressure* and to *forced flexion*, and that ligation—distal or proximal—is now the exception rather than the rule? Need I enumerate the thousand articles of the *Materia Medica* to remind you that the accumulated observations and records of ages concerning them, are now the property of the profession? Need I exhibit to you innumerable models of ingenious mechanism for the relief of deformities, fractures, dislocations, etc., in order to convince you that brains, and hearts, and hands have been actively engaged in this labor of love?

When to save life a limb must be severed, a strangulated hernia liberated, or any other serious operation performed, and you shudder to think of the sensitive fibres beneath the scalpel's edge, do you doubt the excellence of that mysterious agent by which you are rocked to pleasant dreams, and from the effects of which you awake to thank God that such power has been given unto men? If you happen to be a little too light-headed to judge of the relative merits of *Wells*, *Morton* and *Simpson*, do not be surprised, for the rest of the scientific world is, to a great extent, in the same predicament. The value of the thermometer as a means of diagnosis and prognosis, although taught by Von Hagen a hundred years ago, reserved its greatest triumphs for the latter half of the nine-

teenth century. Who does not now rejoice in the accuracy of its revelations, and the increased power it gives us over all febrile diseases? The hæmadynamometer and the sphygmograph, though instruments of less practical value, show the eternal vigilance of those who stand on the watch-towers of the medical Zion.

Every day new and useful applications of the *aerosmic skeletonizer* or *atomizer* are discovered, giving efficiency to our efforts in many cases where formerly the impotence of our art was proverbial.

Among the latest advances in our science, may be mentioned the antiseptic or non-suppurative plan for the treatment of compound fractures and other terrible lacerations—so marvellous are the results as compared with all former experience, that it seems but slight exaggeration to say that if one gets blown up you have only to pick up the pieces, wrap them in carbolic acid, linseed oil and carbonate of lime, and in two or three weeks he will be about his business.

Can any one doubt that new *scope* has of late been given to our science, when he reads but the names of the instruments now employed? The *microscope* is, indeed, an old instrument, though new in its wonderful revelations, with its monocular and binocular arrangements, and in its association with the spectroscope of *Sorby*, it will detect the one hundred thousandth part of a grain of mercury or of arsenic, or demonstrate the presence of a single blood-disc.

The stethoscope—a title as unscientific and ridiculous as that by which I often designate Cammann's double instrument, viz.: "*My ear spectacles*,"—nevertheless it does reveal to our *mental* vision not only what is transpiring in the *breast* of a fellow mortal, but by means of *vesicular murmurs*, râles, bruits, funic souffles, aneurismal thrills, &c., faithfully conducted to the tympanum, it tells its tale of joy or sorrow, dispelling ill-grounded fear; or, fortifying against the evil day which it enables us to prognosticate. The ophthalmoscope—comparatively new—tells with accuracy not only the physiological and pathological processes which are going on in the very recesses of the eye, but by its use disease of distant organs has been detected before it had been suspected to exist; and even this slight reference will recall to every medical

mind another accurate means of diagnosis discovered by a *Bright* light of the present century. The *Laryngoscope* holds such intimate converse with the very organ of voice as to make it declare facts which otherwise would never have been known or spoken. The *Rhinoscope* often puts us on the right scent; and the *Gastroscope*, the *Stomatoscope*, the *Otoroscope*, and all the other *scopes*, give but a slight indication of the constant *periscope* which every medical man must observe, if he would not be considered as belonging to a bye-gone age.

Yet, notwithstanding the endless series of classified, demonstrable and practicable verities existing in every department of medicine and surgery; to say that there were no doubts, no difficulties, no uncertainties, would be to rob the profession of half its glory; out of these springs the impossibility of any fellowship with the uneducated; out of these grows the immense responsibility which attends his every movement; he must decide between life and limb when the question is so evenly balanced that a hair would turn the scale. 'Tis his solemn duty, "in as much as in him lieth," to resolve these doubts, to clear up these uncertainties, by the indefatigable and self-sacrificing use of all the organs of special sense, aided by all the knowledge that faithful study can afford, and assisted by all the means which Nature (whose resources are deloped by science and art) has so liberally placed at his disposal. If, after all these, *doubt* and *danger* and *death* succeed each other, as sometimes they will, 'twere arrant folly to suppose that ignorance and empiricism could have done better. But, there comes up from respectable sources the serious charge that the members of the medical profession are narrow-minded, sectarian, illiberal; so wedded to old theories and old habits as to refuse assent to important truths when fairly discovered and fully proved. If this charge can be substantiated, then surely our stewardship as guardians of the public health ought to be taken from us. Oh! let the evil day never come when the profession shall be frightened out of its conservatism. It is well, that occupying so high a trust, it should ever obey the apostolic injunction to "*prove* all things, and hold fast" *only* "that which is good." In the exercise of this blessed conservatism, the acceptance of some half-demonstrated fact may have been slightly delayed, but it

can easily be shown that in all its history the regular profession has been an earnest defender of, and eager seeker after, truth. Having no exclusive system of practice to maintain (for remember, that word *allopathy* is a *misnomer*, which, whenever used in reference to scientific medicine, implies on the part of the speaker carelessness, ignorance or impertinence), having, I repeat, no exclusive dogma to defend, it has ever been ready to accept truth from any and every source. Thus from a negro it received the knowledge of the tonic virtues of quassia, and generously acknowledged the debt by transferring the negro's name to the article. It learned the use and the dangers of antimony from the combined experience of the monks and the swine, and again the name is significant of the fact. It learned the feasibility of the *Casarian* section of a distracted and despairing cobbler, who used a shoe-knife for the operation, and pack-thread for sutures. It learned the anterior operation for cataract from the accidental wounding of an opaque lens by an awl thrust through the cornea and the pupil. From a Jesuit it received its knowledge of cinchona. A dairy-maid taught it how to prevent small-pox. It learned the anthelmintic properties of koussou of the Chinese, and the use of lobelia of the American savage. In all ages, in all climates—from black and white, rich and poor, old and young, male and female—from ignorant and learned—from dead and living—from accident and design, it gathered one by one its facts both great and small, despising none, prizing all; arranging, comparing, classifying and preserving for the cure and prevention of the “ills that flesh is heir to”—and this is our stock in trade. Now, can any man believe that if a simple law were discovered running through all nature,—a law, by the observance of which we could make medicine a pastime and cure our patients with ease,—can any one believe that we are so stupidly blind to our own interests as to refuse all the benefits of so brilliant a discovery, when we might have them for the asking? You *know* better. You *know* that one has only to announce to you, with apparent sincerity, that a drop of vinegar would produce general anaesthesia if allowed to fall from a height upon the second toe of the right foot, and ridiculous as the proposition seems, and really is, yet so important are the interests involved, that be-

fore to-morrow night numerous experiments would be tried to demonstrate the truth or falsity of the proposition. Every physician in the land would be prepared to say, and positively, too, *it's false*; but the rest of mankind would be divided. D. D.s and LL. D.s (I say it respectfully) would give certificates that they had seen the thing done; and so the cause of true science must ever suffer till those who, of all the citizens, are best qualified to judge correctly, shall be more deliberate and careful in their observations, and more logical in their conclusions.

It will be observed that a large proportion of the more brilliant discoveries in medicine have been made within the memory of men now living. Is not this true in *every* department of science and art? Was it not reserved to this age, so to utilize the most explosive of detonating compounds, that a child can take them in his tiny hand and safely strike a light? Have we not pontooned the Atlantic with steamships, and tunnelled it for lightening steeds which bring the news of each day *fresh* from the Old World, like hot rolls for the breakfast table? Is it not a worn-out and feeble metaphor to say that we send messages everywhere "on the wings of the wind?" And are not these and a thousand other wonders the product of *our* ingenuity—the result of *our* wisdom? Is not this the greatest of all the ages, and are not we the cleverest of all the people of this clever age? My friends, *this* is the boastful spirit of the times—this the temper by which the wisdom of all the past is ignored. But, my medical brethren, let it not be so with us; let *us* at least remember the debt of gratitude due to all who have labored diligently in the earlier days, when lights were *few* and *dim*. Let us remember that what they bequeathed to us was just as essential to our progress as is the alphabet to all literature. The *labors*, the *mistakes*, the *failures*, as well as the *successes* of our forefathers have gradually and certainly led us to every scientific achievement of which we are so justly proud. I say this, not only as an act of simple justice to our predecessors, but to remind you how certainly we should *gripe* without the light of their experience, and how ridiculously false any theory must be which madly denies the value of all *they did*—of all *they suffered*, and of all *they observed*.

